Amendments to the Specification

Please add the following new heading before paragraph [0002] as follows:
BACKGROUND

Please add the following new heading before paragraph [0008]:
SUMMARY OF THE INVENTION

Please replace paragraph [0008] with the following amended paragraph:
[0008] ~~The~~ An object of the present invention is ~~therefore~~ to provide a device for the precise machining of material with which these disadvantages of the state of the art are overcome.

Please delete paragraph [0009].

Please replace paragraph [0010] with the following amended paragraph:
[0010] ~~The objective is achieved in particular by~~ The present invention provides a device for the precise machining of material, in particular organic material, comprising a pulsed laser system with a beam source, a cavity-dumped fs oscillator being provided as beam source.

Please replace paragraph [0011] with the following amended paragraph:
[0011] ~~The objective is furthermore achieved by~~ The present invention provides a device for the precise machining of material, in particular organic material, comprising a pulsed laser system with a cavity-dumped fs oscillator as beam source in which a working beam of the beam source can be applied to the material using a beam apparatus with at least one means for beam deflection, the pulse emission correlating with the beam deflection and the means for beam deflection including means for releasing laser pulses. By release is meant that the laser is released for a laser pulse and the laser pulse is initiated as soon as the laser can again emit a laser pulse corresponding to its maximum repetition rate. By correlation of the pulse emission with the beam deflection is meant in particular that the pulse emission can take place when the beam has been steered to a specific point, the pulse emission is thus triggered depending on the beam deflection.

Please replace paragraph [0012] with the following amended paragraph:

[0012] ~~The objective is likewise achieved by~~ The present invention provides a device for the precise machining of material, in particular organic material, comprising a pulsed laser system with a cavity-dumped fs oscillator as beam source, the energy of the radiation being approximately 100 nJ to 10 μJ, preferably 500 nJ to 5 μJ. The repetition rate of the radiation is preferably 50 khz to 1 Mhz, particularly preferably 100 khz to 500 khz. The focus diameter of the radiation is preferably approximately 500 nm to 10 μm, particularly preferably 3 μm to 5 μm. The pulse duration of the radiation is preferably approximately 100 fs to 1 ps, particularly preferably 200 fs to 300 fs.

Please add the following new heading before paragraph [0041]:

BRIEF DESCRIPTION OF THE DRAWINGS

Please add the following new heading before paragraph [0048]:

DETAILED DESCRIPTION

Please replace paragraph [0056] with the following amended paragraph:

[0056] In the particular design of the invention, the eye is pressed by a suction ring 32 onto a contact lens 31 which is either flat or preferably essentially adapted to the curvature of the cornea. The suction ring is securely connected to the beam hole of the laser apparatus, which ensures a defined position of the cornea relative to the laser focus. The expanded femtosecond laser beam is focused into the cornea with a lens system 24. A beam splitter which is highly reflective for the laser wavelength and transmitting for visible light, reflects the laser beam into the beam path of a surgical microscope which serves to observe and center the eye. The focusing lens system 24 forms part of the microscope objective. Together with a bundling lens system, a real intermediate image of the cornea can be produced which can be viewed three-dimensionally with the stereo eyepiece 80. The beam-deflection unit 23 deflects the expanded laser beam ~~15~~ 15' perpendicular to its propagation direction. Thus the laser focus can be directed to different points in the cornea. The focus depth can be varied by moving the focusing lens system 24 along the optical axis or by adjusting the focal length of the focusing lens system.

Please replace paragraph [0058] with the following amended paragraph:

[0058] The beam source 11 is a "cavity-dumped" femtosecond oscillator which is preferably directly diode-pumped and thus simple and reliable. The emitted laser beam 15 is preferably expanded to 1-2 cm beam diameter with a Galilean telescope. Colinear to the expanded laser beam ~~15~~ 15', a visible laser beam is superimposed from a pilot laser 27, and is then scanned and focused together with the machining laser beam. For this purpose, the beam splitter 57 is transparent for the femtosecond laser wavelength and reflective for the pilot beam.

Please replace paragraph [0066] with the following amended paragraph:

[0066] **Figure 4** shows schematically a section from a possible scan pattern in which the individual spots 16 machined by individual laser pulses are arranged along paths which can be traveled continuously by the scanner. In order to achieve a sufficiently large spot distance at high repetition rates of the beam source 11, the focus is moved very rapidly in at least one of three scan dimensions. The scan algorithms are therefore preferably such that the spots are placed along paths which correspond to the natural movements of the deflection unit. The movement in the other two dimensions can then take place relatively slowly. The natural paths of the deflection unit can be e.g. orbits which can travel the deflection units at fixed rotation frequencies. This can take place e.g. by rotating optical elements in the deflection unit. The radius of the orbit and the focus depth (Z direction) are then the scan variables that can be changed slowly. This variant is particularly suitable if rotation-symmetrical cut figures have to be produced. The repetition rate of the laser can be particularly effectively used when the rotation frequency of the orbits is chosen such that, in the case of the largest orbits (B) to be traveled, the full repetition rate of the beam source leads to the desired spot distance ~~b~~ d. If the radius (A) of the orbits becomes smaller upon traveling the cut pattern, the repetition rate of the source can be reduced correspondingly with the result that the optimum spot distance again results. This adjustment of the repetition rate is directly possible with a suitable cavity-dumped oscillator. An adjustment of the rotation frequency to the repetition rate of the source can be more difficult technically, in particular if this is continuous for each orbit (A, B). To reduce the machining time, however, an adjustment of the rotation frequency in a few steps to the smaller orbits can be advantageous.